Filing Date: July 21, 2003

Title: DISPERSING AGENTS FOR PIGMENTS OR EXTENDERS BASED ON ACRYLIC ACID ALKYL ESTER POLYMERS

#### IN THE SPECIFICATION

Please amend the specification as follows:

# Please amend the paragraph beginning at page 1, line 8 as follows:

This application is a continuation of U.S. Patent Application No.: 09/075,613, filed on May 11, 1998, issued as U.S. Patent No. 6,596,816 which is entitled Dispersing Agents for Pigments or Extenders Based on Acrylic Acid Alkyl Ester Polymers, which application is incorporated herein by reference.

# Please amend the paragraph beginning at page 3, line 19 as follows:

In addition to these amines, one or more amines can also be used from the group comprising c) saturated or unsaturated aliphatic amines comprising 6 - 22 carbon atoms, d) alicyclic amines comprising up to 6 carbon atoms, e) aryl-substituted alkylamines and f) polyoxyalkylene amines  $NH_2 - R^4 - [0 - R^3 - ]_x \cdot 0 - R^3 - NH_2 - R^1 - [O - R^2 - ]_x \cdot O - R^3$ , wherein  $R^1$  is a divalent alkylene radical comprising 2 - 3 carbon atoms,  $R^2$  is a divalent alkylene radical comprising 2 - 4 carbon atoms and  $R^3$  is an alkyl radical comprising 1 - 4 carbon atoms.

### Please amend the paragraph beginning at page 7, line 20, as follows:

#### Example 2:

1450 g of a poly-n-butyl acrylate with a weight average molecular weight of about 12,000 were mixed with 177 g dimethylaminopropylamine. In addition, 0.5 g p-toluenesulphonic acid were added as a catalyst. The reaction mixture was heated to reflux (about 180°C) under nitrogen. The boiling point fell to about 130°C, due to the ethanol evolved during the reaction. After about 15-17 hours the reaction was complete and the <u>n-butanol</u> ethanol which was evolved was distilled off. The polymer obtained in this manner had a weight average molecular weight of 12,850 g/mole.

# Please amend the paragraph beginning at page 10, line 2, as follows:

#### Example 11:

100.91 g of the polymer produced as in example 2 were mixed with 35.32 g methoxypolyethylene glycol (MW about 350). The reaction mixture was heated to 100°C under

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nitrogen. Then 0.33 g tetraisopropyl orthotitanate were added and the batch was stirred for 2 hours at 200°C. A further 0.33 g tetraisopropyl orthotitanate were then added and the batch was stirred for a further 2 hours at 200°C. The n-butanol ethanol which was evolved was distilled off. 0.17 g tetraisopropyl orthotitanate was then added and the batch was stirred for 1 hour at 200°C. The n-butanol which was evolved was distilled off.

# Please amend the paragraph beginning at page 10, line 23, as follows:

# Example 13:

105.14 g of the polymer produced as in example 2 were mixed with 22.34 g butyltriglycol. The reaction mixture was heated to 100°C under nitrogen. Then 0.33 g tetraisopropyl orthotitanate were added and the batch was stirred for 2 hours at 200°C. A further 0.33 g tetraisopropyl orthotitanate were then added and the batch was stirred for a further 2 hours at 200°C. The n-butanol ethanol which was evolved was distilled off. 0.17 g tetraisopropyl orthotitanate was then added and the batch was stirred for 1 hour at 200°C. The n-butanol which was evolved was distilled off.

# Please amend the paragraph beginning at page 11, line 14, as follows:

#### Example 15:

93.50 g of the polymer produced as in example 2 were mixed with 25.10 g (about 0.1 mole) oleyl alcohol. The reaction mixture was heated to 100°C under nitrogen. Then 0.33 g tetraisopropyl orthotitanate were added and the batch was stirred for 2 hours at 200°C. A further 0.33 g tetraisopropyl orthotitanate were then added and the batch was stirred for a further 2 hours at 200°C. The n-butanol ethanol-which was evolved was distilled off. 0.17 g tetraisopropyl orthotitanate was then added and the batch was stirred for 1 hour at 200°C. The n-butanol which was evolved was distilled off.

# Please amend the paragraph beginning at page 12, line 5, as follows:

### Example 17:

98.45 g of the polymer produced as in example 2 were mixed with 20.67 g (about 0.1 mole) of an allyl polyether (Uniox PKA 5001/Nippon OIL & FATS Co., Ltd.). The reaction mixture was heated to 100°C under nitrogen. Then 0.33 g tetraisopropyl orthotitanate were added and the batch was stirred for 2 hours at 200°C. A further 0.33 g tetraisopropyl orthotitanate were then added and the batch was stirred for a further 2 hours at 200°C. The nFiling Date: July 21, 2003

Title: DISPERSING AGENTS FOR PIGMENTS OR EXTENDERS BASED ON ACRYLIC ACID ALKYL ESTER POLYMERS

<u>butanol</u> ethanol which was evolved was distilled off. 0.17 g tetraisopropyl orthotitanate was then added and the batch was stirred for 1 hour at 200°C. The n-butanol which was evolved was distilled off.

# Please amend the paragraph beginning at page 13, line 1 as follows:

These pigment pastes were then added to a two-component, isocyanate-crosslinking acrylate solution (Macrynal SM515) (a hydroxy functional acrylic polymer); 70 % in butyl acetate/Desmodur N75 DESMODUR N75 (hexamethylene diisocyanate); 75 % xylenelMPA (1:1)) and to a white lacquer, which was also based on Macrynal SM515/-Desmodur N75 DESMODUR N75. High-gloss lacquer films were obtained.

# Please amend the Table beginning at page 14, line 7 as follows:

### Two-component clear lacquer

	Spezial-	Bayferrox	Novopermrot	Heliogenblau
	schwarz 4	130M	F3RK70	L7101F
Clear Lacquer	12.40	11.50	11.60	10.70
Hardener solution	6.10	5.70	5.80	5.30
( <del>Desmodur N75</del>				
DESMODUR N75)				
Pigment paste	1.50	2.80	2.60	4.00
Total	20.00	20.00	20.00	20.00

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# Please amend the Table beginning at page 14, line 15 as follows:

# Two-component white lacquer

	Spezial-	Bayferrox	Novopermrot	Heliogenblau
	schwarz 4	130M	F3RK70	L7101F
Clear Lacquer	15.30	14.90	14.70	14.70
Hardener solution	4.40	4.10	4.00	4.00
( <del>Desmodur N75</del>				
DESMODUR N75)				_
Pigment paste	0.30	1.00	1.30	1.30
Total	20.00	20.00	20.00	20.00

#### Please amend the Abstract of the Disclosure as follows:

The present invention relates to dispersing agents for pigments or extenders based on acrylic acid alkyl ester polymers, wherein at least part of the ester groups of the polymers is reacted to form acid amides, wherein the dispersing agent is obtainable by the aminolysis of ester groups of the polymers by means of amines, wherein, for the aminolysis, at least one amine is used from the group comprising a) amines of general formula NH<sub>2</sub>—R<sup>+</sup>—NR<sup>2</sup>R<sup>2</sup>, wherein R<sup>+</sup> is a divalent alkylene radical comprising 2—4 carbon atoms and R<sup>2</sup> and R<sup>2</sup> are aliphatic and/or alicyclic alkyl radicals which comprise 1—12, preferably 1—6 carbon atoms and which can be the same or different, and b) amines of general formula NH<sub>2</sub>—R<sup>+</sup>—Z, wherein R<sup>+</sup> is a divalent alkylene radical comprising 2—4 carbon atoms and Z is a 5—or 6—membered N—containing heterocycle which can comprise up to 2 nitrogen atoms or which can additionally comprise oxygen such as amino alkylenyl heterocycles. The invention also relates to the use of the dispersing agents according to the invention for the production of pigment concentrates and coating media, and to a process for producing the dispersing agents.